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43 BASIC TELEPRINTER

INSTALLATION AND REMOVAL

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1. GENERAL

1.01 This section provides station installation and removal information for the 43 KSR and RO Station (Fig. 1).

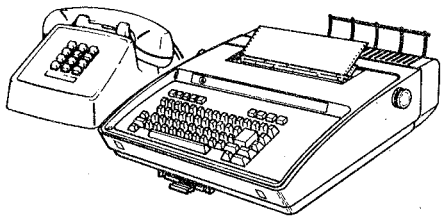

Fig. 1—43 KSR Station (Sprocket Feed)

1.02 This section is reissued to include installation and removal information for KSR and RO terminals (sprocket feed and friction feed) equipped with an integrated Terminal Data Unit (TDU), an integrated Terminal Auxiliary Unit (TAU) or no integrated terminal unit.

1.03 Installation should be performed under the direction of a service order indicating USOC code, options, date, materials required and location.

1.04 For additional information, refer to: Section 574-500-501, RO Teleprinter Testing, Section 574-500-500, Basic KSR Teleprinter Testing, and Section 574-500-210, Engineering Options.

1.05 The 43 Teleprinter is furnished fully assembled and tested with an integrated TAU, TDU, or no integrated terminal unit ready to connect to an external communications device or distant terminal or between a modular 500DM or 2500DM-type keyless telephone and the line telephone jack. Where telephones and jacks are not of the modular type, they must be converted to the modular type before station installation. (Refer to local procedures and Section 503-100-100 for conversion information.)

Note: When installing a terminal with an integrated TDU (KSR or RO w/telephone) obtain locally or from Teletype Corporation at least one D4BU modular cord of the appropriate length to connect between the telephone and the 43 Teleprinter (Fig. 4). Discuss with customer where the teleprinter and phone are to be installed before obtaining cord(s).

1.06 Before starting the installation procedure, verify that two boxes which make up the Basic 43 Teleprinter Arrangement are present at the installation location. The two boxes will contain:

(a) 43 Teleprinter and Documentation

(b) Paper

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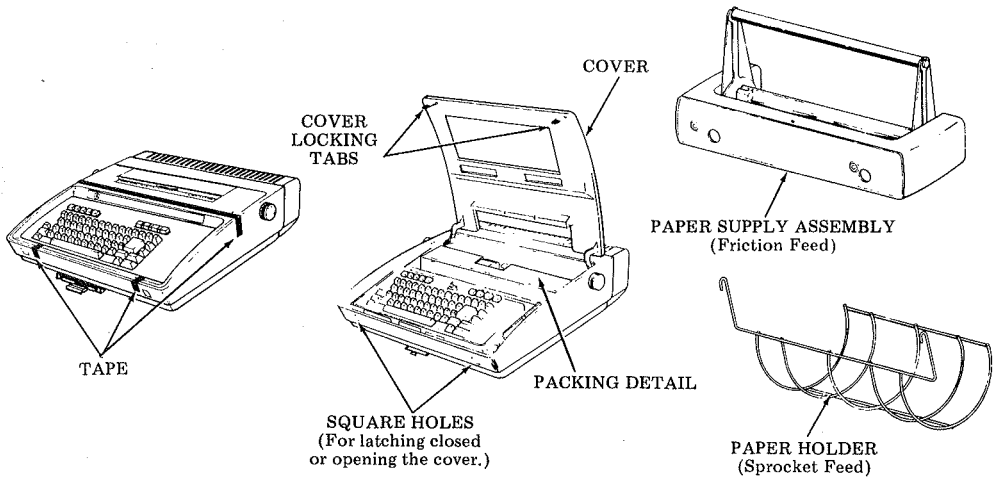


Fig. 2—Packing Detail

1.07 Reference in the procedures to left or right, up or down, and top or bottom, etc, refer to the teleprinter in its normal operating position.

1.08 When ordering replaceable components, unless otherwise specified, prefix each part number with the letters "TP" (ie, TP430202).

2. TOOLS REQUIRED

2.01 No tools are required to install or remove the 43 Station with integrated TDU. A screwdriver (1/4 inch, 6 inch blade — 100982) will be required to install the 43 Station with integrated TAU, or no integrated terminal unit. For tools required to enable engineering options, refer to the Engineering Options, Section 574-500-210.

3. INSTALLATION PROCEDURE

UNPACKING

3.01 Select an area to unpack the carton so that damage to the terminal will not occur.

3.02 When unpacking, be sure to wear approved safety glasses.

3.03 Unpack the large carton. Refer to instructions on the container. Remove tape securing the cover to the housing (Fig. 2).

Note: Observe all "caution" notes printed on the carton.

3.04 Depress the cover locking tabs on the lower front of the cabinet and lift the cover. Remove the packing detail securing the print head in place (Fig. 2).

3.05 The containers and other packing details are to be retained and reused by field locations to facilitate movement of stations.

3.06 Verify that the following items are included with the service order and are at the installation location after the boxes are unpacked.

1 — Set 43 Teleprinter (Fig. 3)
1 — Paper Holder (Sprocket Feed Only)
1 — Paper Supply Assembly (Friction Feed Only)
1 — Ribbon
1 — Paper, Box of White Fan-Fold 12 x 8-1/2", E6879 (Sprocket Feed Only)
1 — Paper, Box of White Roll 8-1/2", KS8621 (Friction Feed Only)
1 — Manual, Attendant:
4320/AAB and AAF — 999-300-126
4320/AAC and AAD — 999-300-127 and 999-300-129
4320/AAA and AAE — Manual 367
4310/AAB and AAF — 999-300-128
4310/AAC and AAD — 999-300-128 and 999-300-130
4310/AAA and AAE — Manual 372
1 — Practice, Installation (Section 574-500-200)
1 — Plan, Wiring (W-43AXS)

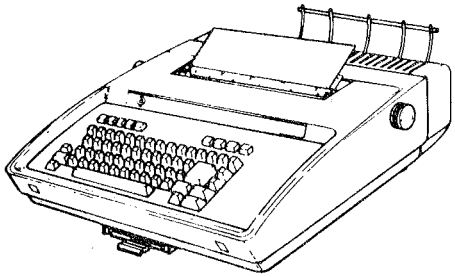
IDENTIFICATION

RO TELEPRINTERS

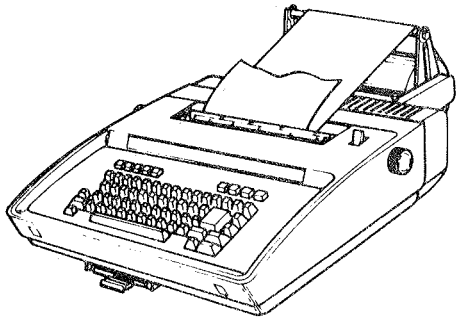
Sprocket Feed With TDU — 4310/AAB
Sprocket Feed With TAU — 4310/AAC
Sprocket Feed With TTL — 4310/AAA
Friction Feed With TDU — 4310/AAF
Friction Feed With TAU — 4310/AAD
Friction Feed With TTL — 4310/AAE

KSR TELEPRINTERS

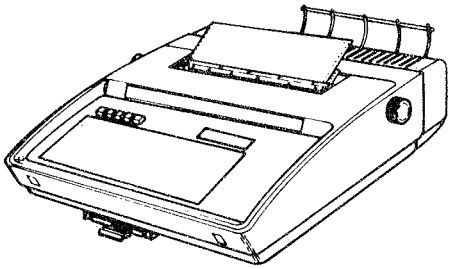
Sprocket Feed With TDU — 4320/AAB
Sprocket Feed With TAU — 4320/AAC
Sprocket Feed With TTL — 4320/AAA
Friction Feed With TDU — 4320/AAF
Friction Feed With TAU — 4320/AAD
Friction Feed With TTL — 4320/AAE



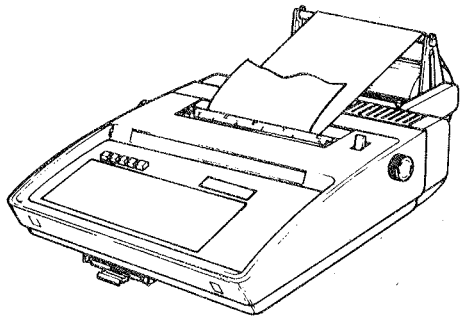
43 KSR — Sprocket Feed



43 KSR — Friction Feed



43 RO — Sprocket Feed



43 RO — Friction Feed

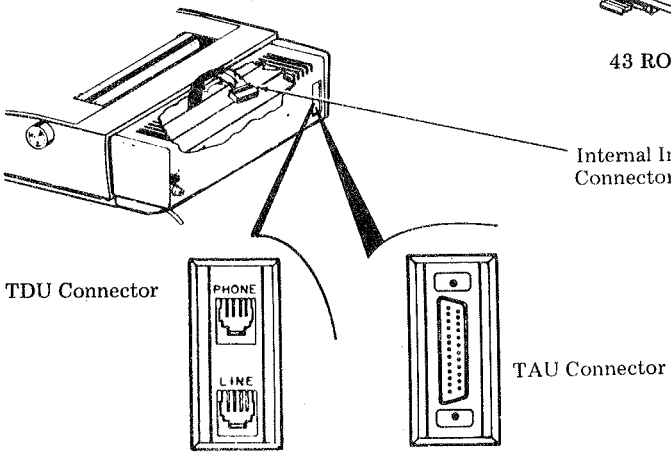


Fig. 3—Identification

CONNECTION

3.07 Place the 43 Teleprinter on the desk, table, etc, indicated by the customer. Placement should be near the external communications device or modular phone that will be used with the teleprinter.

4310 AAB and AAF RO Sets With TDU
4320 AAB and AAF KSR Sets With TDU

Modular telephone present at installation location:

3.08 Unplug the modular plug of the D4BU cord from the modular jack associated with the telephone specified on the service order (compress tab to release) and connect it to the lower connector marked LINE on the rear of the TDU accessible through the opening in the left rear of the bustle cover (Fig. 4). If telephone is not to be placed at original phone location, a different length cord may be needed. Connect the additional modular cord between the upper connector on the TDU marked PHONE and the telephone jack.

3.09 Since the two cords are interchangeable, the selection of which cord to apply to which function is a matter of installer judgement based on length of cords available and terminal location with respect to the wall jack.

No modular telephone present at installation location:

3.10 Connect the modular cord plug to the lower connector marked LINE on the rear of the TDU, accessible through the opening in the left rear of the bustle cover. Connect the remaining end of the modular cord to the line connecting block.

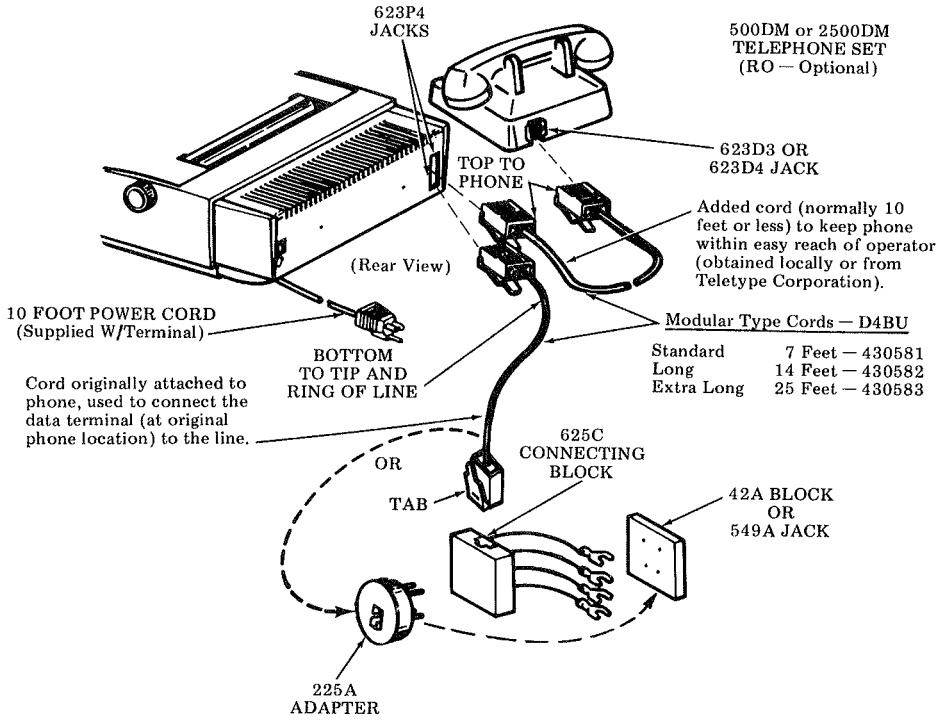


Fig. 4—Telephone Connection

4310 AAC and AAD RO Sets With TAU
4320 AAC and AAD KSR Sets With TAU

3.11 A 25-pin male connector is provided for connection to an external communications device (modem) or distant terminal. The interface meets the requirements of EIA RS-232-C. The pin assignments are given below.

3.12 The connecting cables between the terminal and the data set must be furnished by the installer and should employ shielded cable. The following cables are available from Teletype Corporation.

7 foot length — 408065
12 foot length — 408066
25 foot length — 408067
50 foot length — 408068

EIA DATA SET INTERFACE SIGNALS

Connector Pin	Signal	EIA Circuit Designation	Status
1	Protective Ground	AA	Not Wired in TAU or Recommended Cable
2	Transmit Data	BA	KSR, Active — RO, Always Mark
3	Receive Data	BB	Active
4	Request-to-Send	RS	Always Off (Issue 1B Logic Card) — Always On (Issue 2A Logic Card)
5	Clear-to-Send	CB	Active
6	Data Set Ready	CC	Active
7	Signal Ground	AB	Active
8	Received Line Signal Detector	CF	Active
9			Not Wired in TAU or Recommended Cable
10			Not Wired in TAU or Recommended Cable
11	TWX Control	—	Not Applicable
12	Data Speed Indicator	SCF	Not Applicable
13			Not Wired in TAU or Recommended Cable
14			Not Wired in TAU or Recommended Cable
15			Not Wired in TAU
16			Not Wired in TAU or Recommended Cable
17			Not Wired in TAU
18	TWX Indicator	—	Not Applicable, Not Wired in Recommended Cable
19			Not Wired in TAU or Recommended Cable
20	Data Terminal Ready	CD	Active
21			Not Wired in TAU or Recommended Cable
22			Not Wired in TAU or Recommended Cable
23	Data Speed Select	CH	Always Off
24			Not Wired in TAU or Recommended Cable
25	Analog Loop Test		KSR, Active — RO, Always Off

3.13 The connection to the data set and telephone (if required) should be made following the instructions for the particular data set involved (Fig. 5).

4310AAA and AAE RO Sets Without Interface Signaling Unit
4320 AAA and AAE KSR Sets Without Interface Signaling Unit

3.14 Connection to the external communications device (provided by the customer) is made through a 20-pin connector, Berg 65346-003 or 3M3421-300 or equivalent at the end of a short ribbon cable. No provision is made for adding additional cable length. The pin assignments are given on the TTL Pin Assignment Chart (Page 7).

3.15 Connection to the interface cable requires the removal of the paper holder or paper supply assembly, paper deflector (if present) and bustle cover.

3.16 To remove the paper supply assembly, disengage latches from mounting posts by pulling straight up. Slide assembly from mounting posts (Fig. 6).

3.17 The connections to the telephone, data set or communications device should be performed following the instructions for the particular device involved.

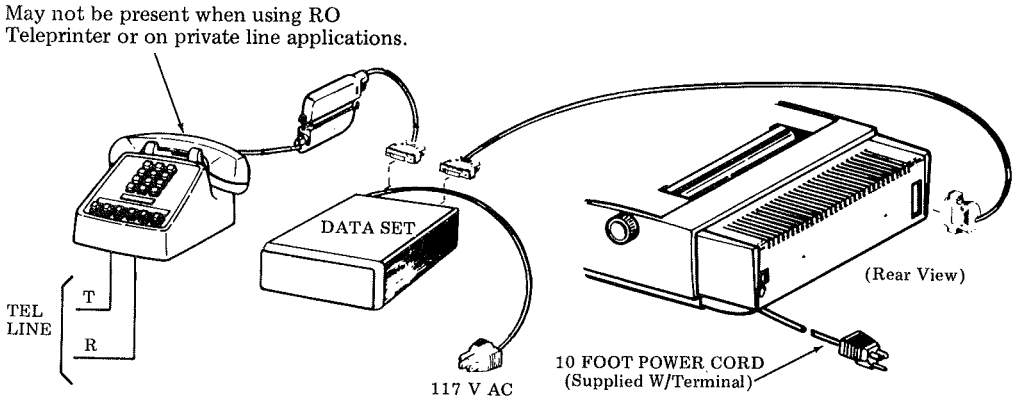


Fig. 5—Data Set Connection (Sets W/TAU)

3.18 Electrical Characteristics of Interface Leads

Electrical signals compatible with low-power TTL logic are utilized for both control and data interchange as descirbed below:

STATE	DRIVER	TERMINATOR
MARK (OFF) (1)	$+2.4 \leq V_{MARK} \leq +5.25$ Volts	$+2.0 \leq V_{MARK} \leq +5.25$ Volts
SPACE (ON) (0)	$0 \leq V_{SPACE} \leq +0.4$ Volts	$0 \leq V_{SPACE} \leq +0.7$ Volts

TTL PIN ASSIGNMENT CHART

Pin No.	Code	Function	Status
1	DL	Digital Loop Test	Active
2	DSI	Data Speed Indicator to Terminal	Not Applicable, Not Wired in TTL Cable
3	AL	Analog Loop Test	KSR, Active — RO, Not Applicable
4	DSS	Data Speed Select from Terminal	Not Applicable, Not Wired in TTL Cable
5	TR	Terminal Ready	Required
6	RS	Request-to-Send	Not Connected, Always Off (Issue 1B Logic Card) — Always On (Issue 2A Logic Card)
7	+5	+5 Volts	Active
8		Reserved for future	Not Applicable, Not Wired in TTL Cable
9	GND	Circuit Ground	Active
10		Reserved for future	Not Applicable, Not Wired in TTL Cable
11	-12	-12 Volts	Active
12		Reserved for future	Not Applicable, Not Wired in TTL Cable
13	+12	+12 Volts	Active
14	DP	Duplex Indicator from Terminal	Not Applicable, Is Wired in TTL Cable
15	DR	Data Ready	Active
16	TW2	TWX Indicator	Not Applicable, Not Wired in TTL Cable
17	RD	Receive Data	Active
18	TW1	TWX Control	Not Applicable, Not Wired in TTL Cable
19	SD	Transmit Data	KSR, Active — RO, Always Marked
20		Reserved for future	Not Applicable, Not Wired in TTL Cable

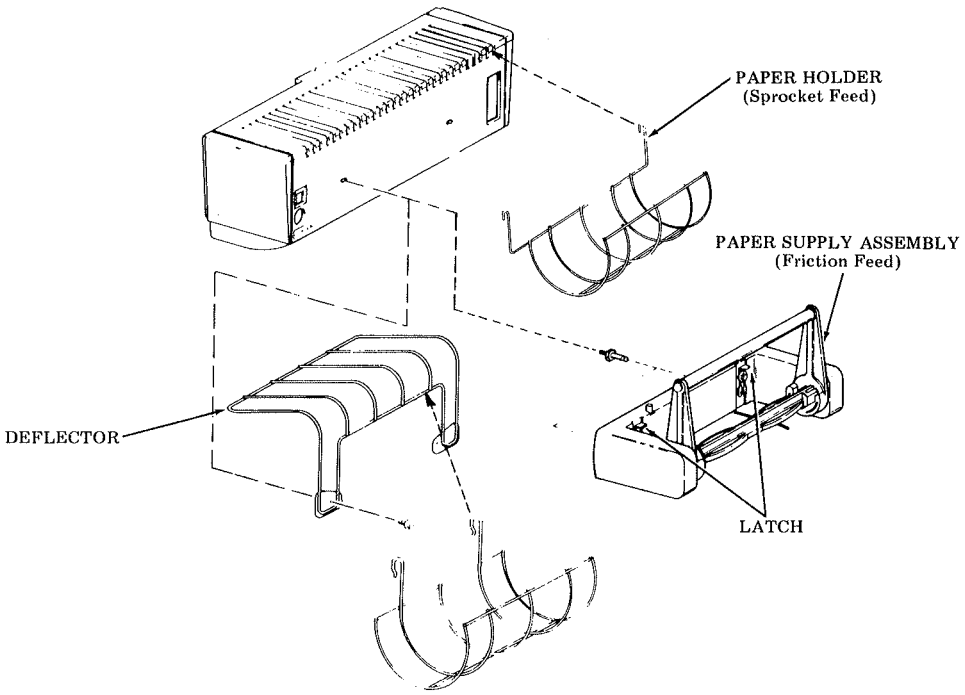


Fig. 6—Paper Holder and Paper Supply Assembly

PAPER HOLDER (Sprocket Feed)

3.19 Attach the paper holder to the deflector if present, otherwise attach it to the bustle cover as shown in Fig. 6.

PAPER SUPPLY ASSEMBLY (Friction Feed)

3.20 Pull the latches straight up and slide the paper supply assembly fully onto the mounting posts, located at the rear of the bustle cover. Push down on the latches until they are secured over the mounting posts.

RIBBON AND PAPER

3.21 Install the ribbon and paper supplied. Refer to the appropriate How to Operate Manual (Paragraph 3.06) for ribbon and paper installation information. Retain the order form provided with the ribbon. Refer to Section 570-008-010 for information on other types of paper.

CHECKOUT PROCEDURE

3.22 Plug the 43 Teleprinter into a properly grounded and polarized 3-wire 115 V ac 50-60 Hz electrical power source.

3.23 Perform the appropriate Station Installation Checkout Procedures (Local and On-Line) found in 43 Basic KSR Teleprinter Testing, Section 574-500-500 and RO Teleprinter Testing, Section 574-500-501.

DIRECTORY CARD

3.24 Record the installed location of the station (floor, area, and phone number), location of extension phone(s) if any, and the number to be called in case of trouble in the space provided on the slide-out directory card (Fig. 8).

3.25 Remove the directory card by pulling it out as far as it will go and moving it side to side. Fill in the information requested on the underside of the card. Replace the directory card.

Note: If the checkout procedure was performed successfully, the teleprinter has the standard engineering options incorporated as shown on the card. Record any nonstandard options enabled in the space provided on the directory card. (Write in any not listed on the card.)

3.26 Clean up the unpacking area, wipe off any finger prints on the set, and turn the 43 Station over to the subscriber.

3.27 Provide the customer with the attendant manual and the ribbon ordering card. Advise the customer to order spare ribbons and paper as soon as possible (quantities depending on expected usage).

Note: If two attendant manuals are present, provide the attendant with the appropriate manual and discard the extra manual. Attendant manuals designated DATAPHONE apply to teleprinters used on the switched network. Attendant manuals designated Private Line apply to teleprinters associated with external data sets used on private lines.

3.28 Advise the customer of the "Trouble number" location on the directory card.

3.29 Place Section 574-500-200, Installation and Removal and the Wiring Plan in the shipping containers and retain.

4. STATION REMOVAL

4.01 Reverse the procedures in 3. INSTALLATION PROCEDURE to remove the station from service (service disconnect).

4.02 If a paper holder was provided with the terminal at the time of installation (check underside of directory card) verify its presence before packing teleprinter.

4.03 Before repacking the teleprinter, move the print head to the center of the printer and insert the packing detail removed in 3.04.

4.04 Using the containers and packing details retained in 3.05, pack the 43 Teleprinter (Fig. 7).

4.05 If a modular telephone is present, reconnect the telephone to the phone line. Retain modular cords for future use.

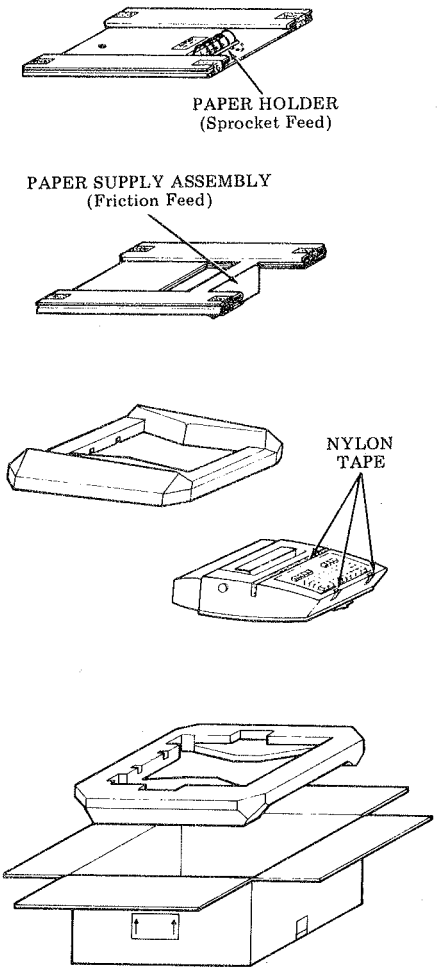
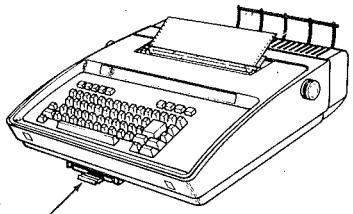


Fig. 7—Packing Details



DIRECTORY CARD

TOP SIDE

FREQUENTLY CALLED NUMBERS

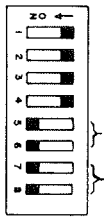
NAME	AREA CODE	TEL. NO.
EXAMPLE		

INSTALLED LOCATION IN BUILDING
FLOOR 3 AREA Post A16 PHONE 341-7296
LOCATION OF EXTENSION PHONE IF ANY Post B16

IF THE TERMINAL DOES NOT APPEAR TO BE WORKING PROPERLY, CONSULT THE "HOW TO OPERATE" MANUAL. THEN IN CASE OF TROUBLE CALL: 362-1212

BOTTOM SIDE

STANDARD SWITCH POSITION



INSTALLATION DATE 11 4-76
INITIALS LM

OPTION NO.	CHECK NON STANDARD OPTIONS ENABLED
435	
434	b. Send Bit 8 Mark
433	
432	c. Line Length — 80
431	

☑ INSTALLATION TEST PERFORMED

LOCATION: Floor 3, Post A16
STATION
TEST CENTER 362-3261
MAINTENANCE SPARES— 431 W. 5th St.
LUBRICATION DATE

FURNISHED AT INSTALLATION:
☑ ATTENDANT MANUAL
☑ PAPER HOLDER
☑ RIBBON & ORDERING CARD
☑ PAPER

DATE	TROUBLE INDICATION	CORRECTIVE ACTION	INITIALS
	EXAMPLE		

Fig. 8—Directory Card